



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
1110 West Washington Street
Phoenix, Arizona 85007

Mr. Philip H. Mook, Jr.
Western Execution Branch Chief
Air Force Civil Engineer Center
United States Department of the Air Force

SUBJECT: 11/17/2016 Letter re: Former Williams AFB Site ST012, Liquid Fuels Storage Area
Path Forward; 11/30/2016 Letter from TerraTherm

Dear Mr. Mook:

Thank you for your letter inquiring about the path forward for the ST012 Site. We acknowledge and appreciate the AF's ongoing efforts to contain and characterize the extent of remaining LNAPL contamination and agree that progress is being made. We look forward to the startup of the new hydraulic containment system in January. Based upon our review of the data being collected, maintaining hydraulic containment will be critical to the future protectiveness of the remedy going forward.

We also received a copy of the November 30, 2016 letter from John Biershank of TerraTherm requesting access to the Site to remove their remaining Steam Enhanced Extraction (SEE) system equipment; *"given the SEE system has been essentially dismantled, AMEC and the Air Force could not restart SEE activities without reconstructing the SEE system and essentially beginning the mobilization process all over again."* In furtherance of continued progress, EPA and ADEQ are in agreement with TerraTherm's request to allow them to remove their equipment from the site.

At this time the path forward for ST12 is complicated by many factors and uncertainties that must be resolved before we can understand and reach agreement upon the most appropriate next steps. The data AF is collecting now will help delineate the lateral extent of contamination as it currently exists, and sentry wells are being installed to enable us to evaluate the success of the hydraulic containment. In our comments on the Field Variance for characterization, we also requested additional wells or borings to be located closer to the known contaminated area to reduce the uncertainty in the extent and mobility of contamination. These are still needed to reduce uncertainty in the estimate of remaining LNAPL mass, but have not yet been added to the field variance memorandum for characterization. Significant and substantial additional concerns have been also identified by our joint agency technical team. Please see the enclosed technical

reviews of the AFs responses to comments which lead us to conclude that that Enhanced Bioremediation is neither appropriate nor ready to be implemented at this time.

We hope that AF appreciates the technical complexity of the problem now to be solved. Given the substantial technical considerations, uncertainties, implementability, remedy effectiveness and cost/benefit considerations, we believe a focused RI/FS is warranted to resolve these issues if the AF chooses not to employ additional SEE to remove the remainder of LNAPL at the site. In the interim we also recommend aggressive extraction to remove as much mobilized LNAPL as possible and prevent the spread of groundwater contamination at the site.

Sincerely,

Angeles Herrera
Assistant Director
Superfund Division
US Environmental Protection Agency

Tina LePage
Waste Programs Division
Remedial Projects Section Manager
Arizona Department of Environmental Quality

Enclosures

cc: Cathy Jerrard, AFCEC
Ardis Dickey AFCEC
Don Smallbeck, Amec
John Biershank, Terra Therm